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Stephenson

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(54) **SOCCER TRAINING APPARATUS AND METHOD**

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Related U.S. Application Data

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A63B 69/00 (2006.01)

(52) **U.S. Cl.** **473/446**; 473/422

(58) **Field of Classification Search** 473/494, 473/454, 446, 447, 445, 435, 422; D21/705, D21/79.1
See application file for complete search history.

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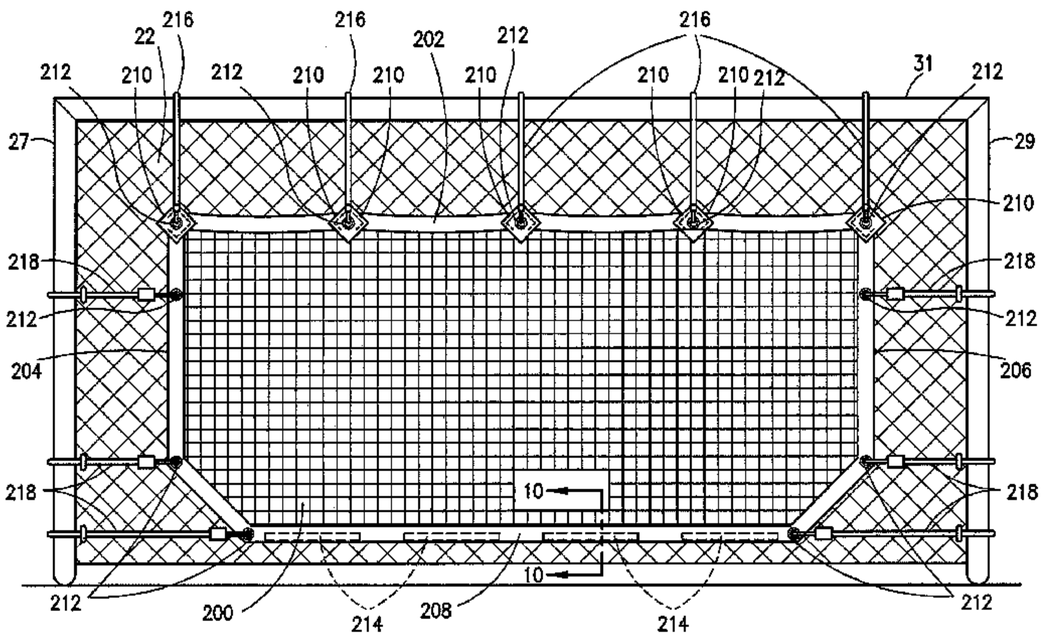
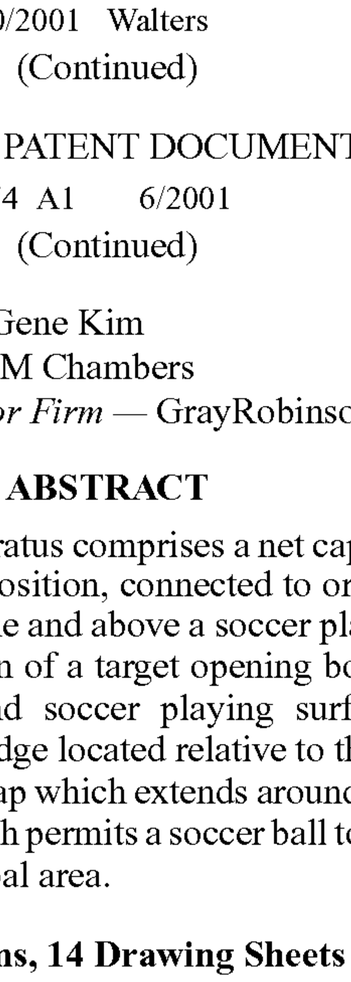
(57) **ABSTRACT**

A soccer training apparatus comprises a net capable of being placed in a deployed position, connected to or located adjacent a soccer goal frame and above a soccer playing surface, so as to cover a portion of a target opening bounded by the soccer goal frame and soccer playing surface. The net includes a peripheral edge located relative to the soccer goal frame so as to form a gap which extends around the net in the deployed position which permits a soccer ball to pass through and enter the soccer goal area.

21 Claims, 14 Drawing Sheets





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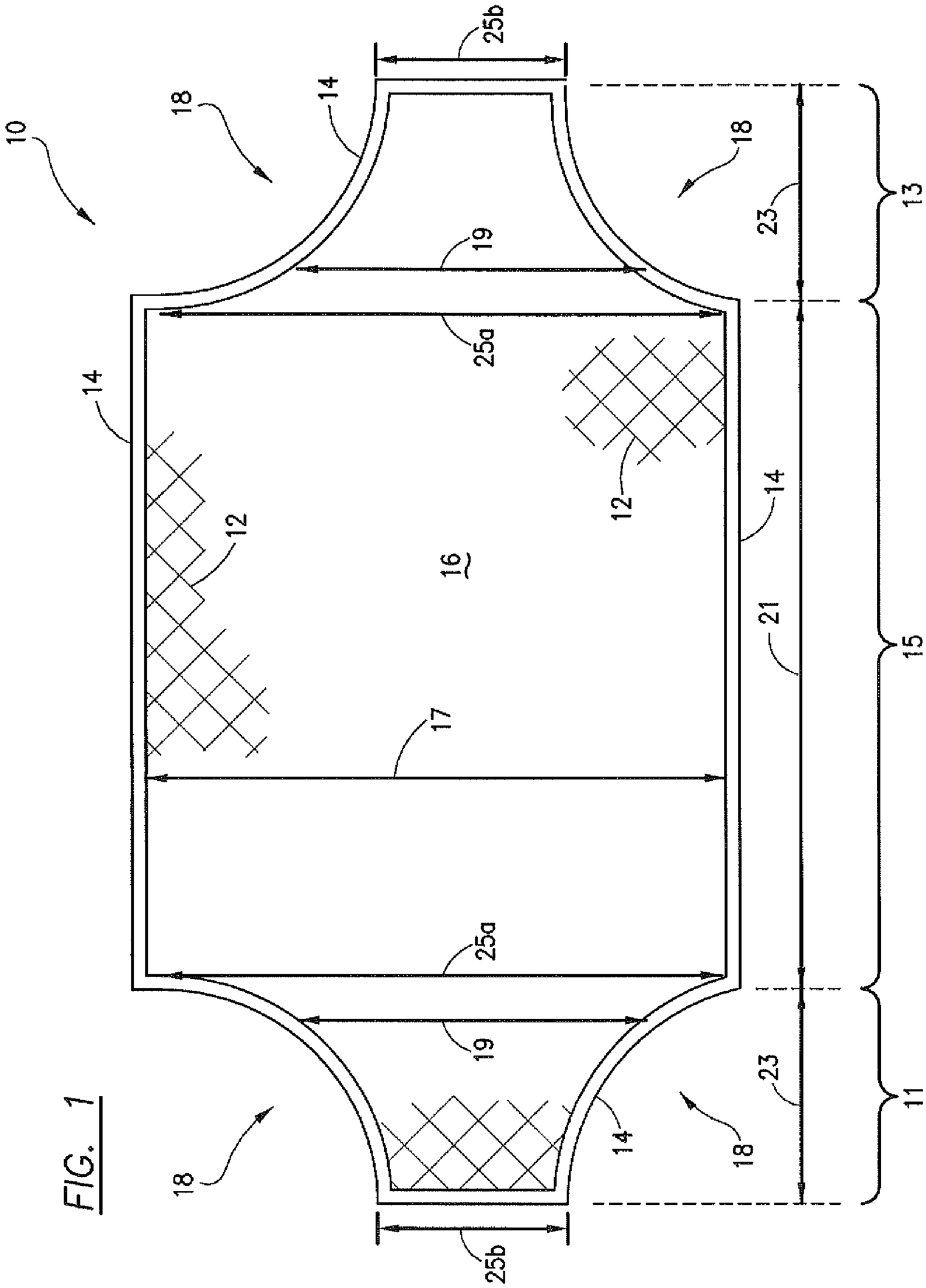
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FIG. 1

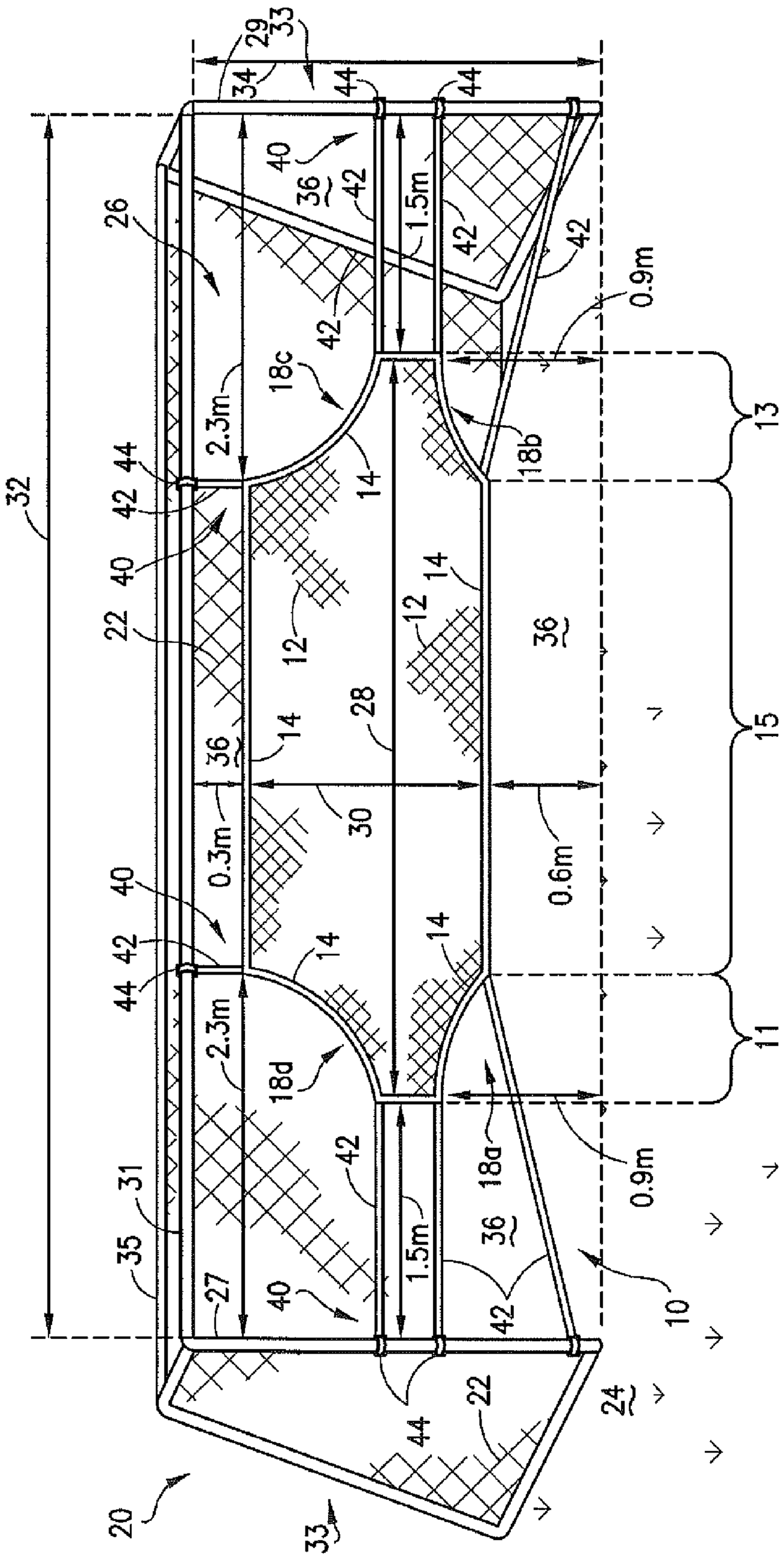
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FIG. 2

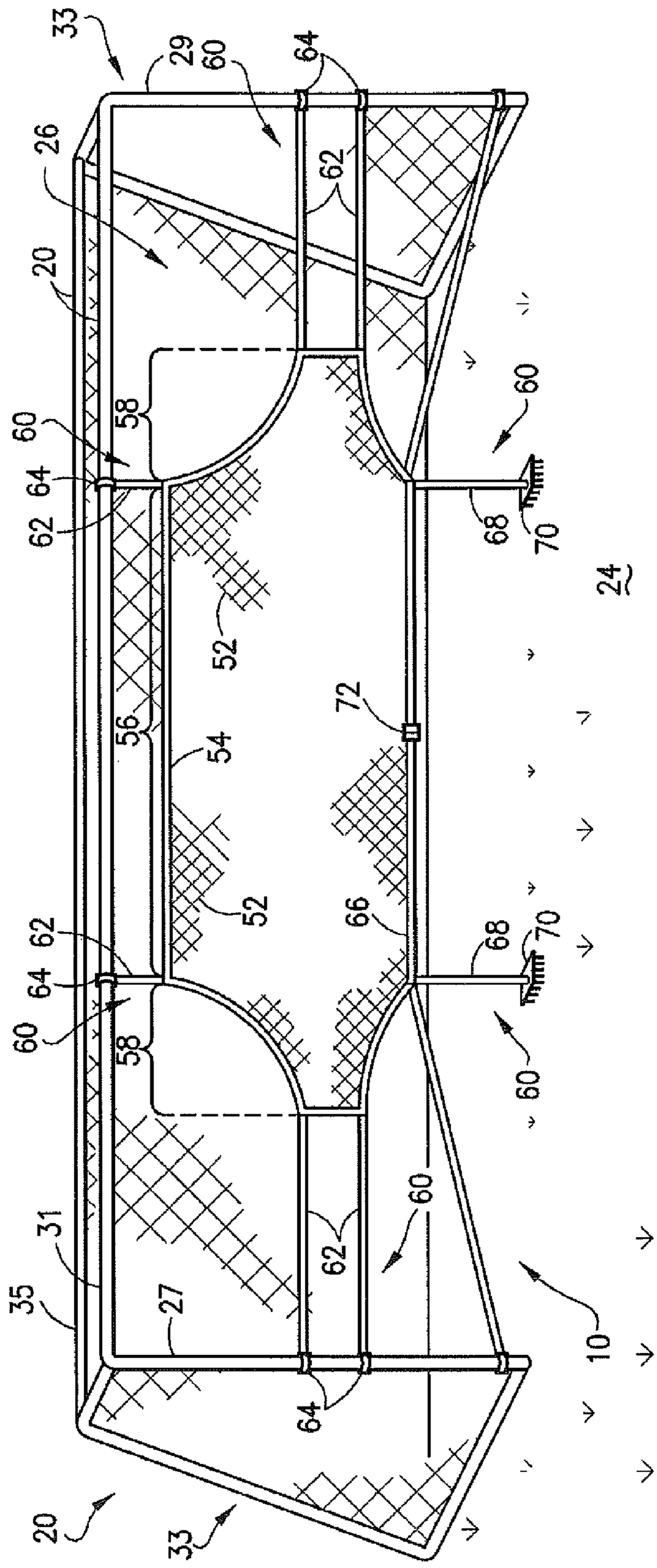
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FIG. 3

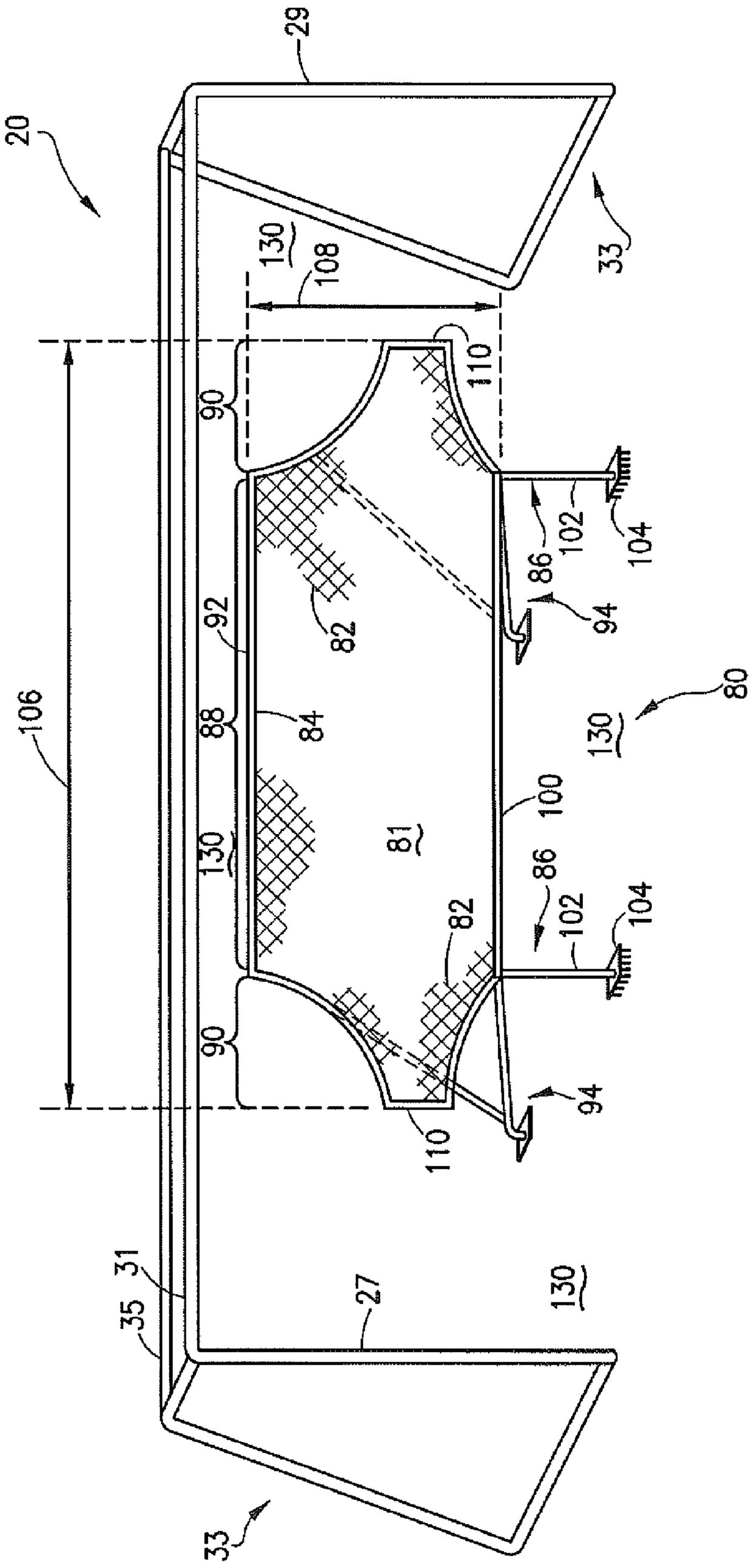
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FIG. 4

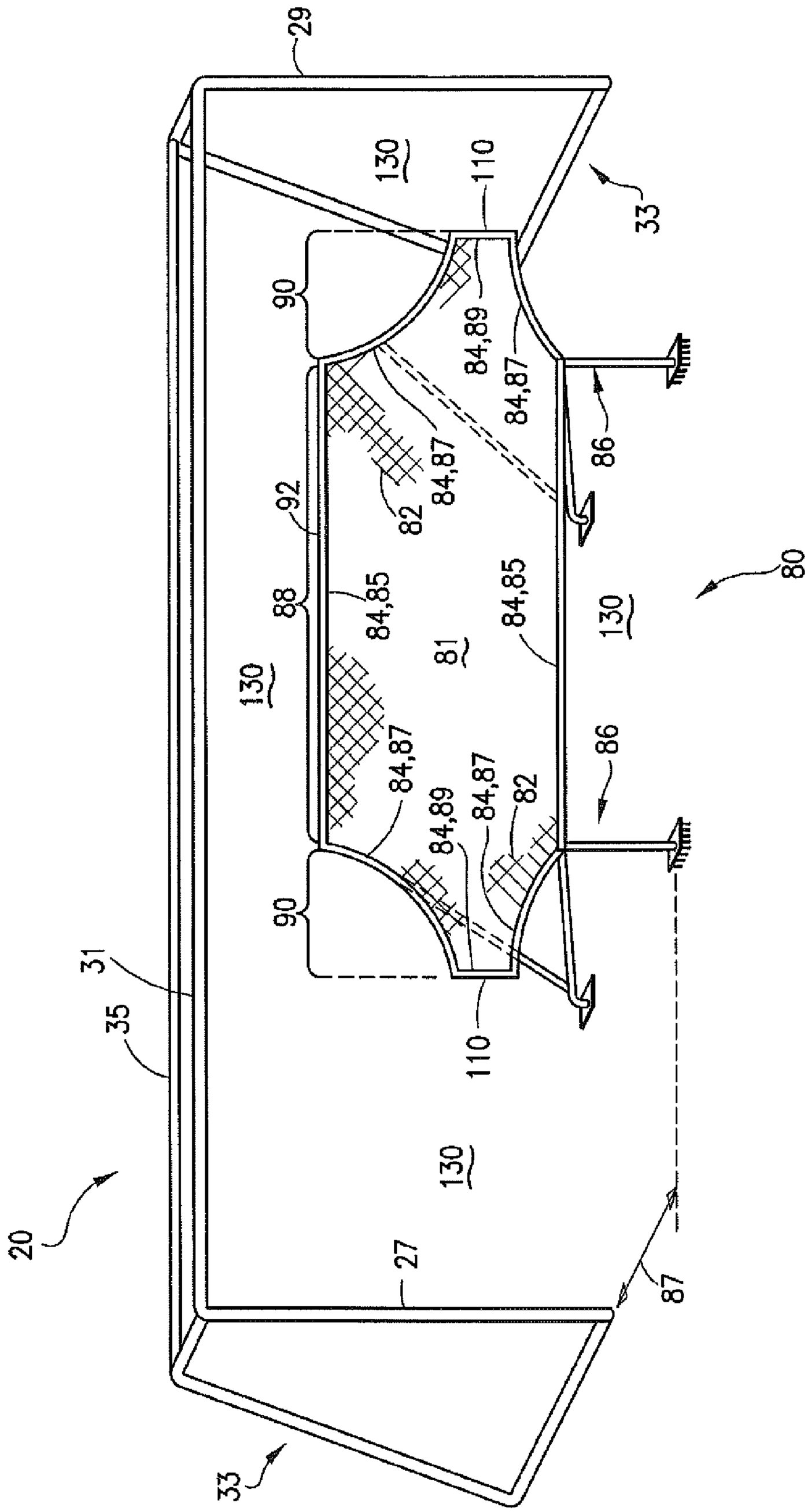

FIG. 5

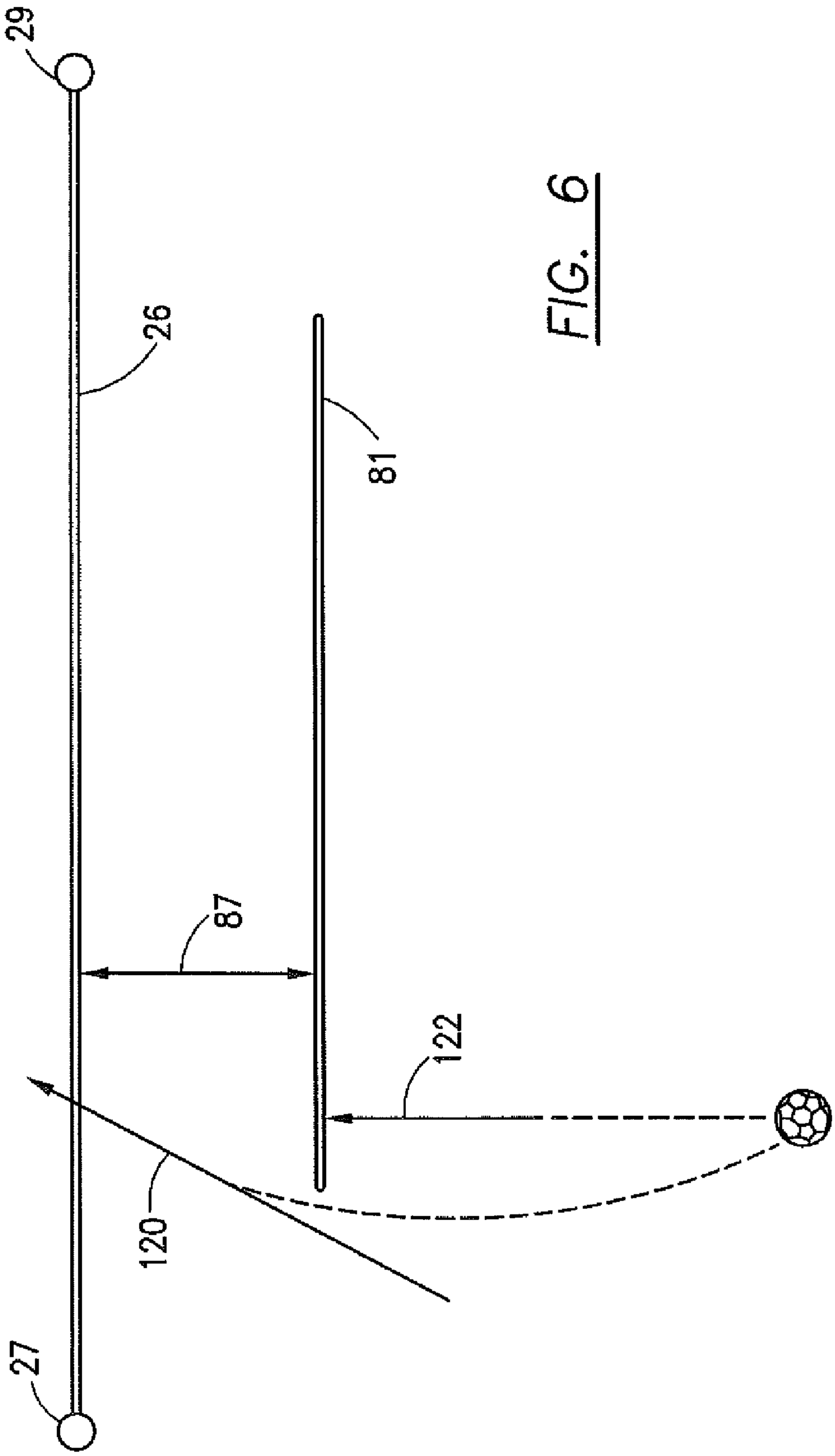

FIG. 6

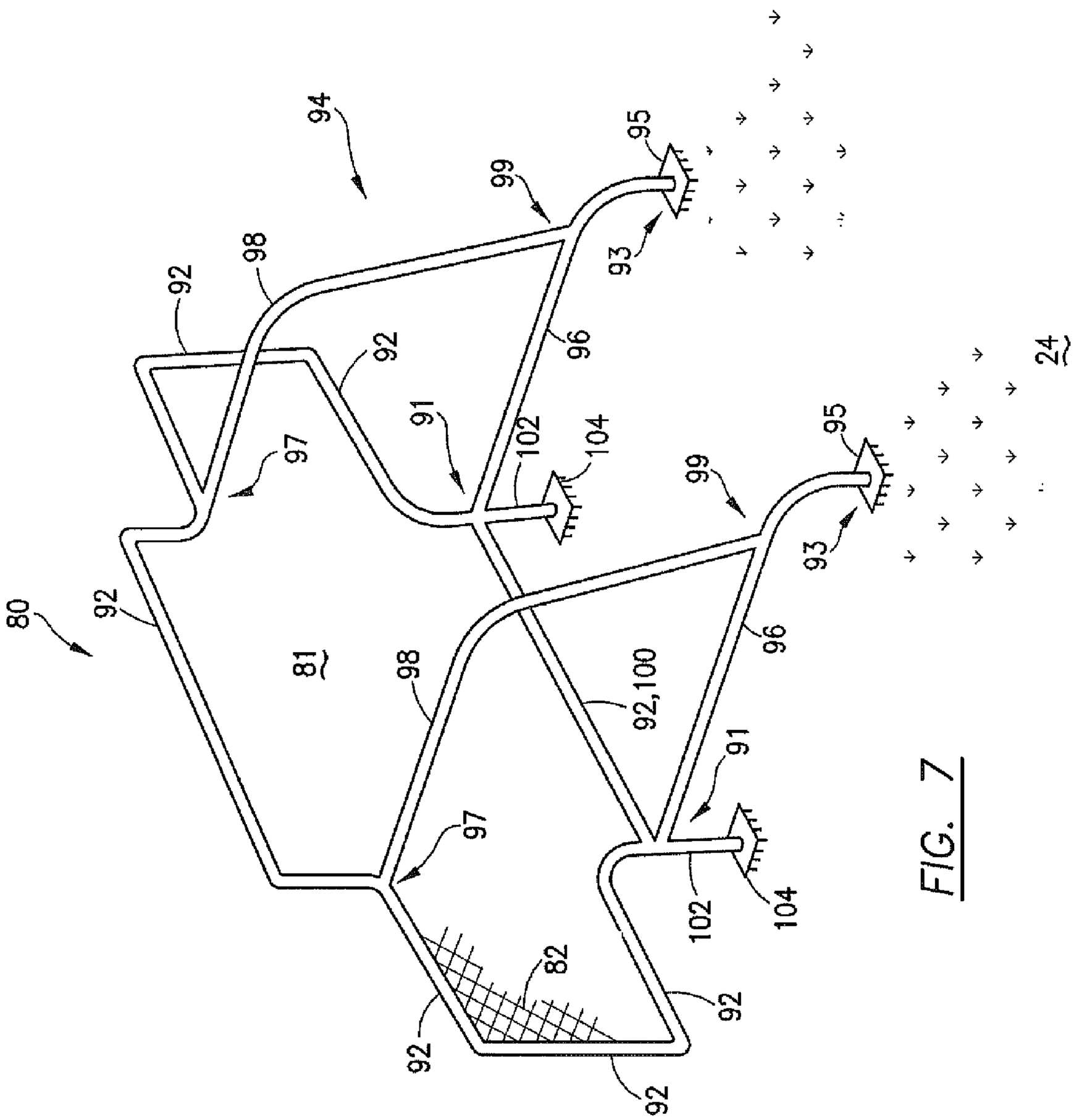

FIG. 7

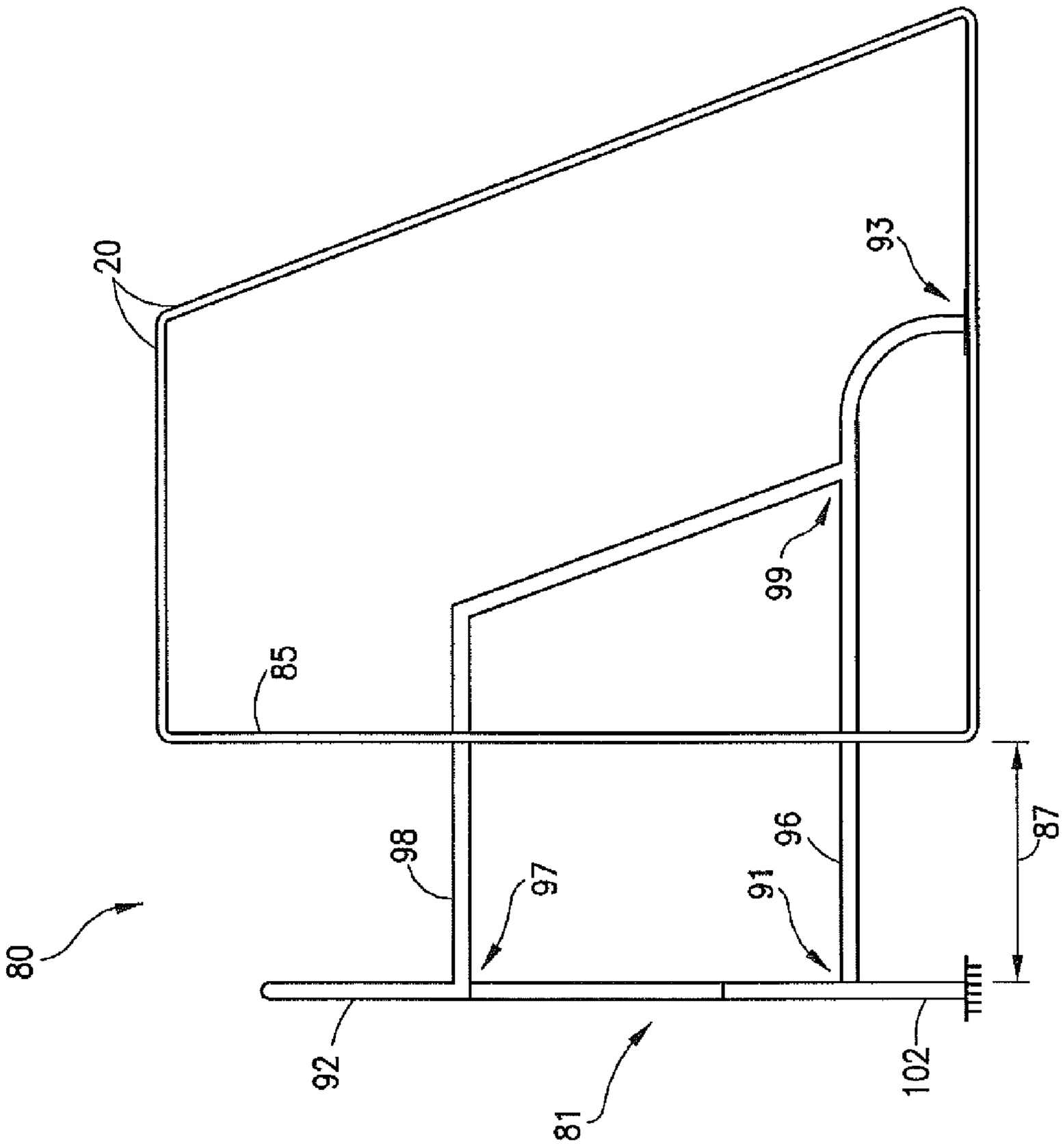

FIG. 8

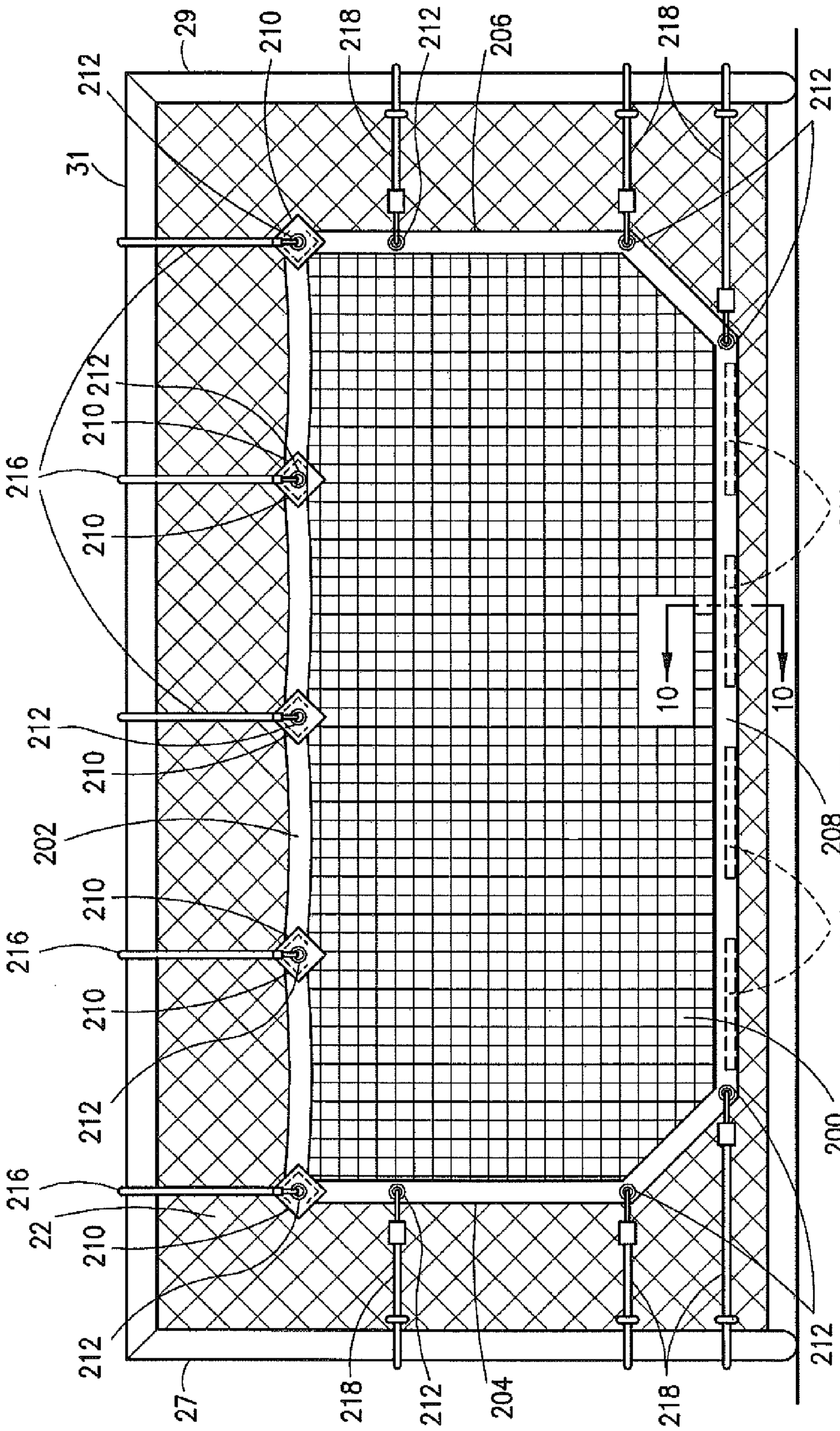
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FIG. 9

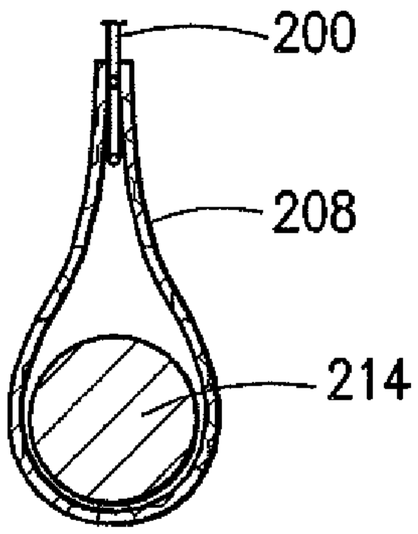

FIG. 10

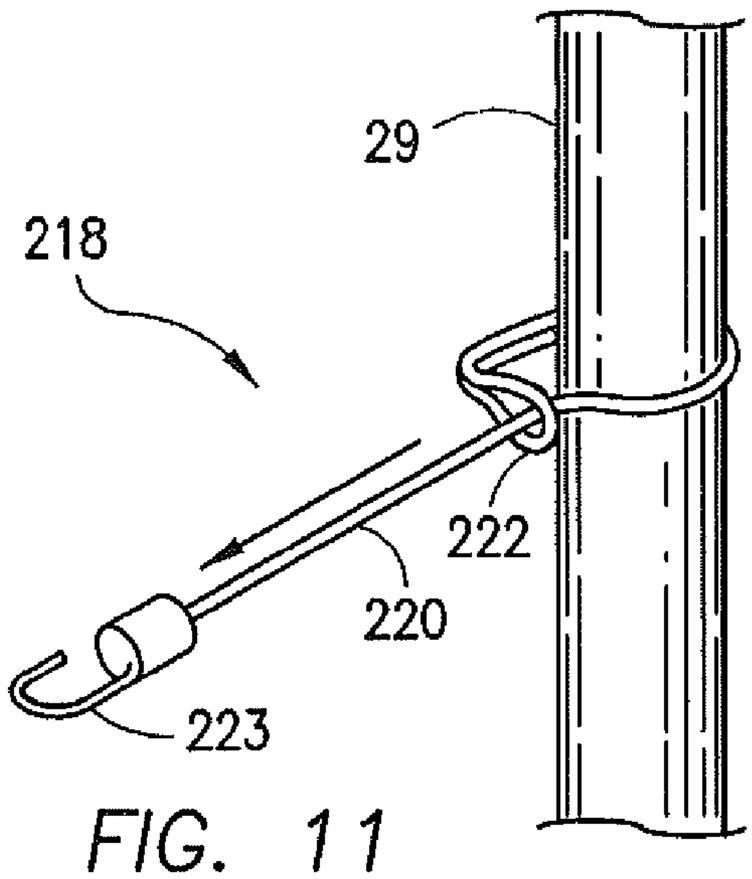

FIG. 11

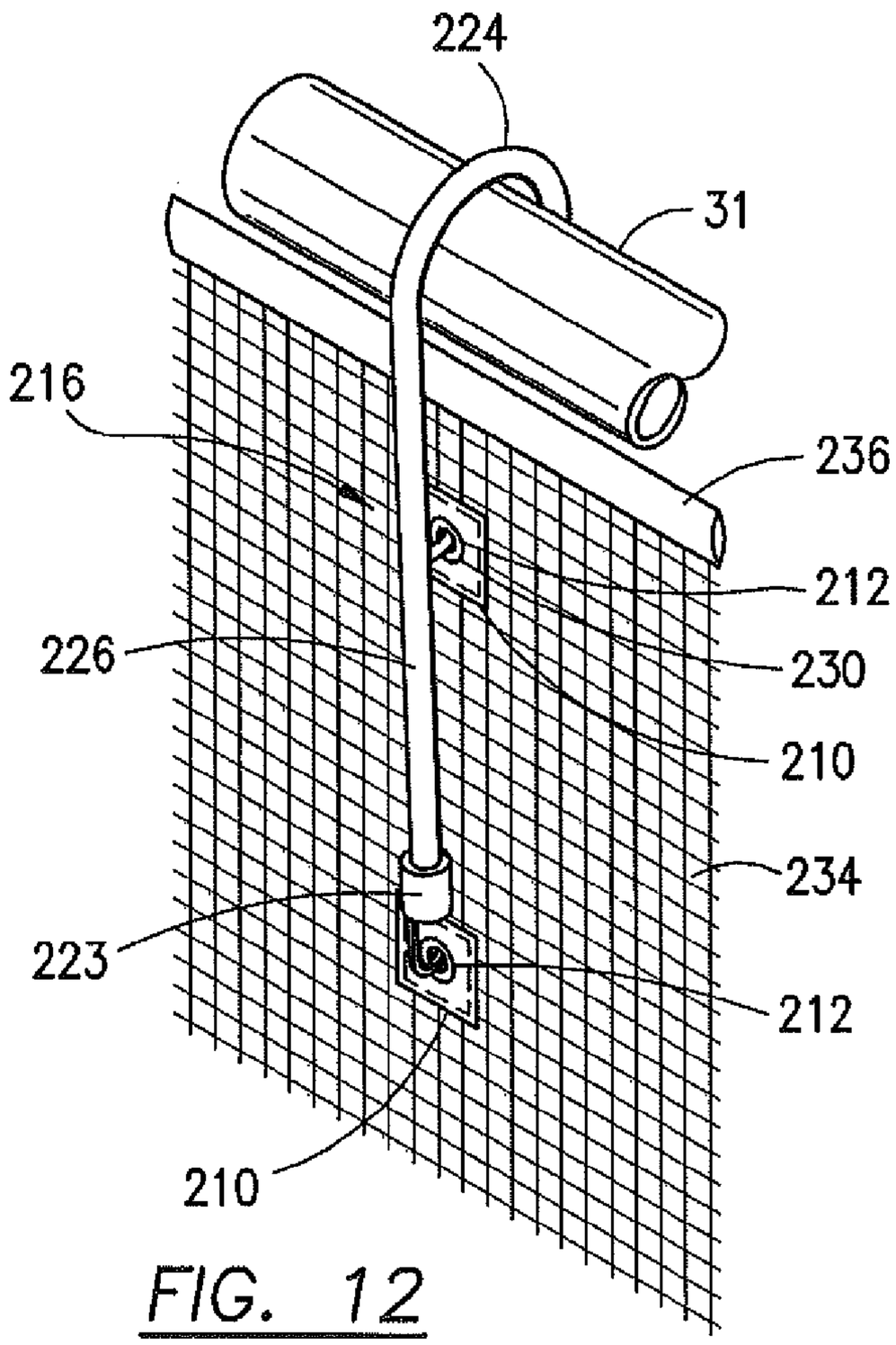

FIG. 12

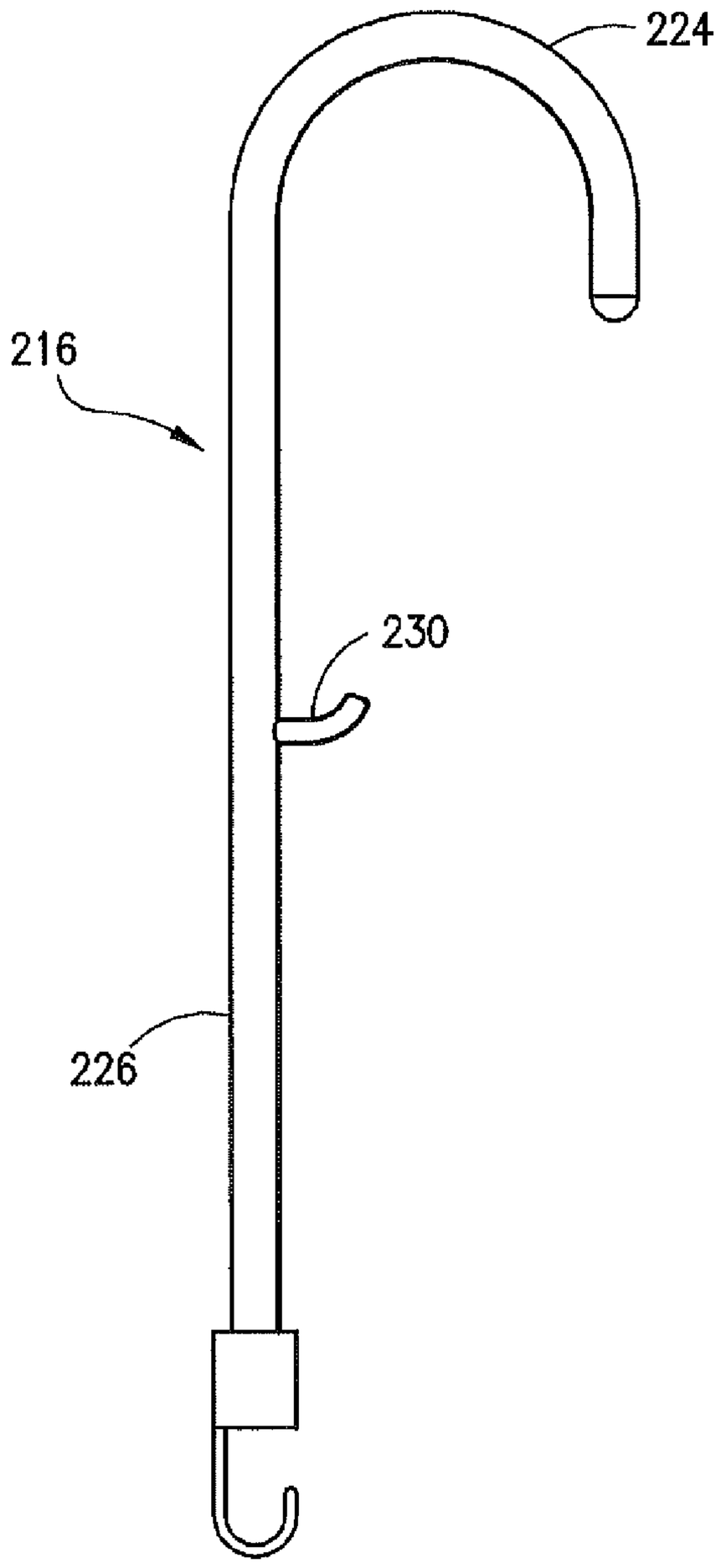

FIG. 13

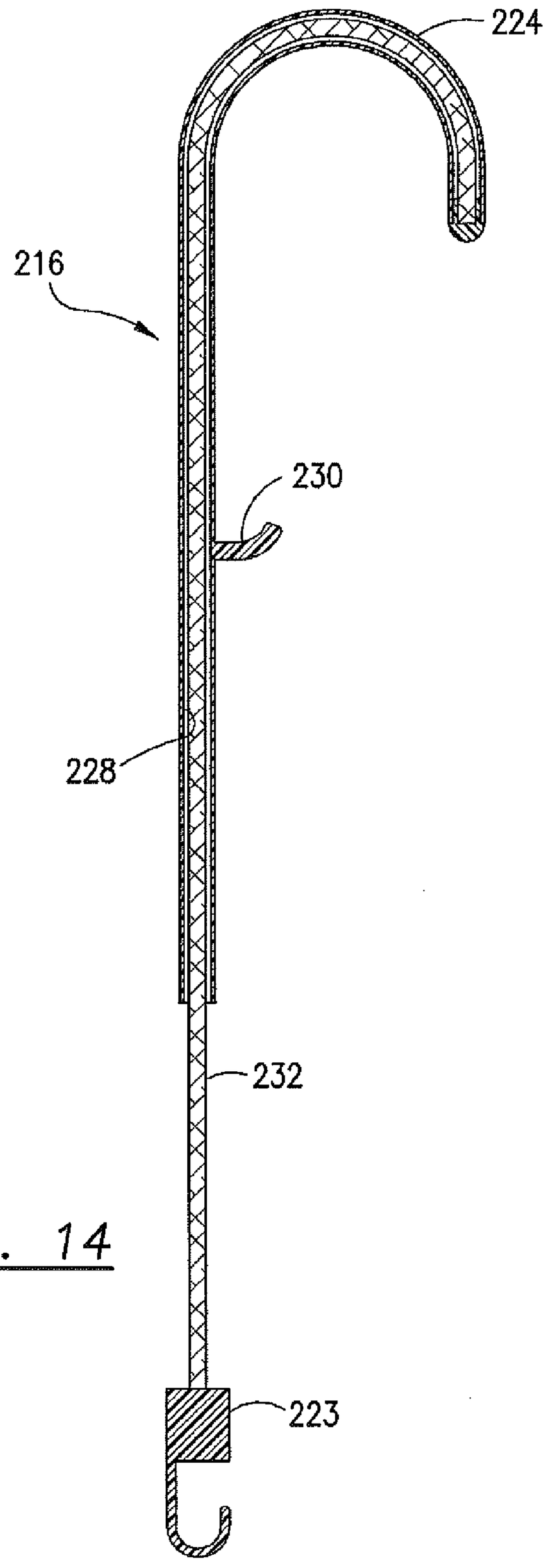

FIG. 14

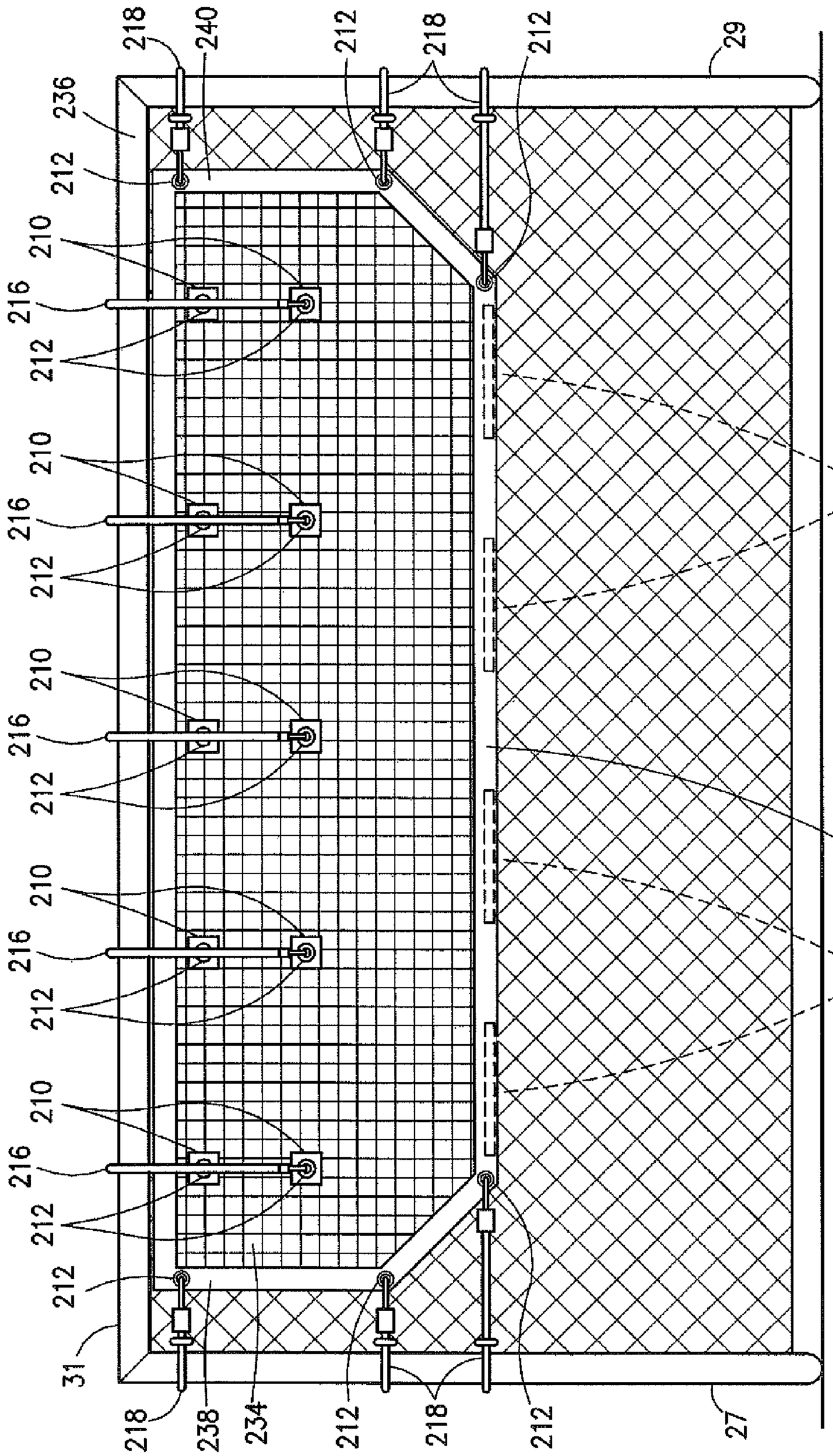
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FIG. 15

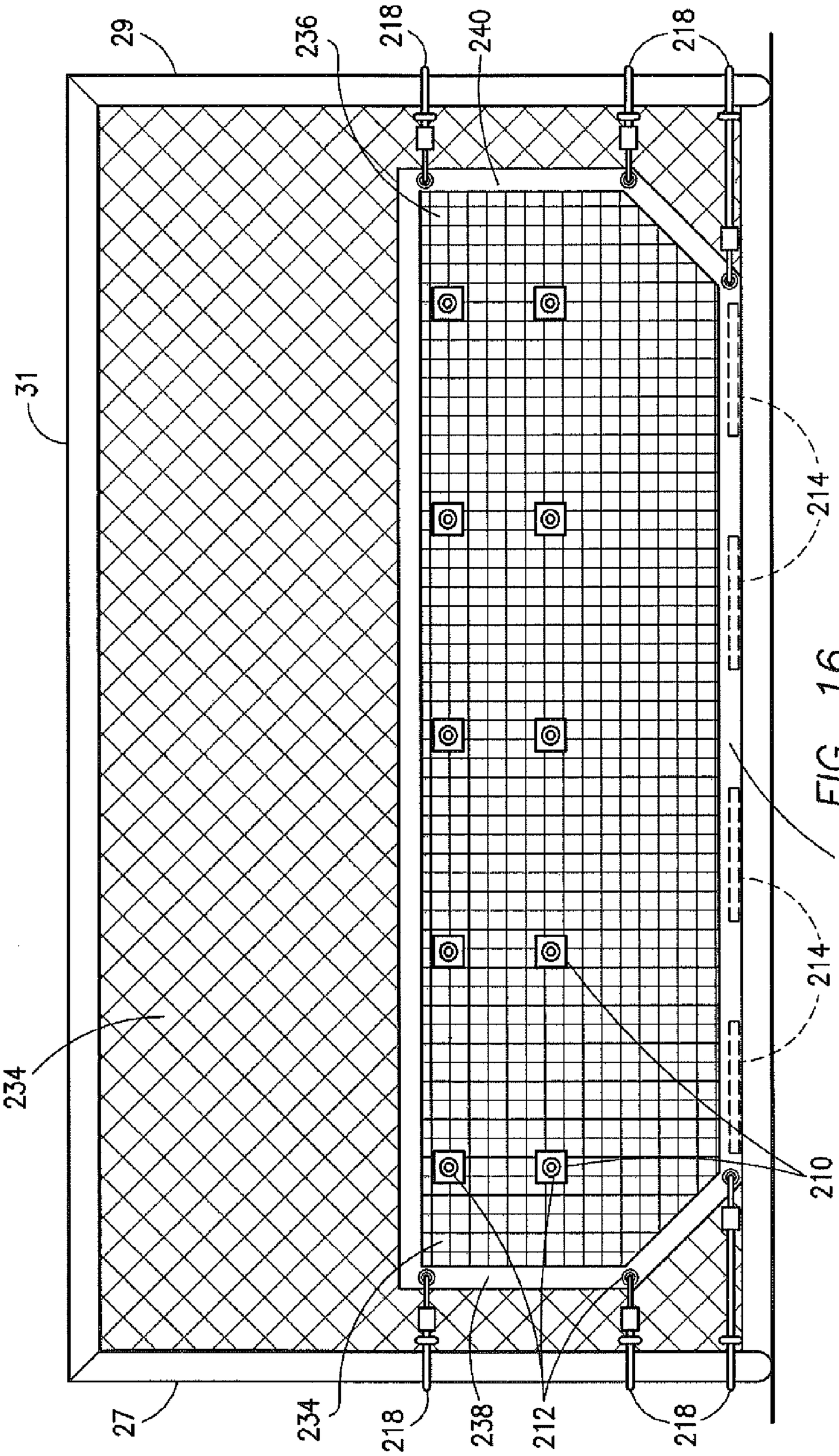

FIG. 16

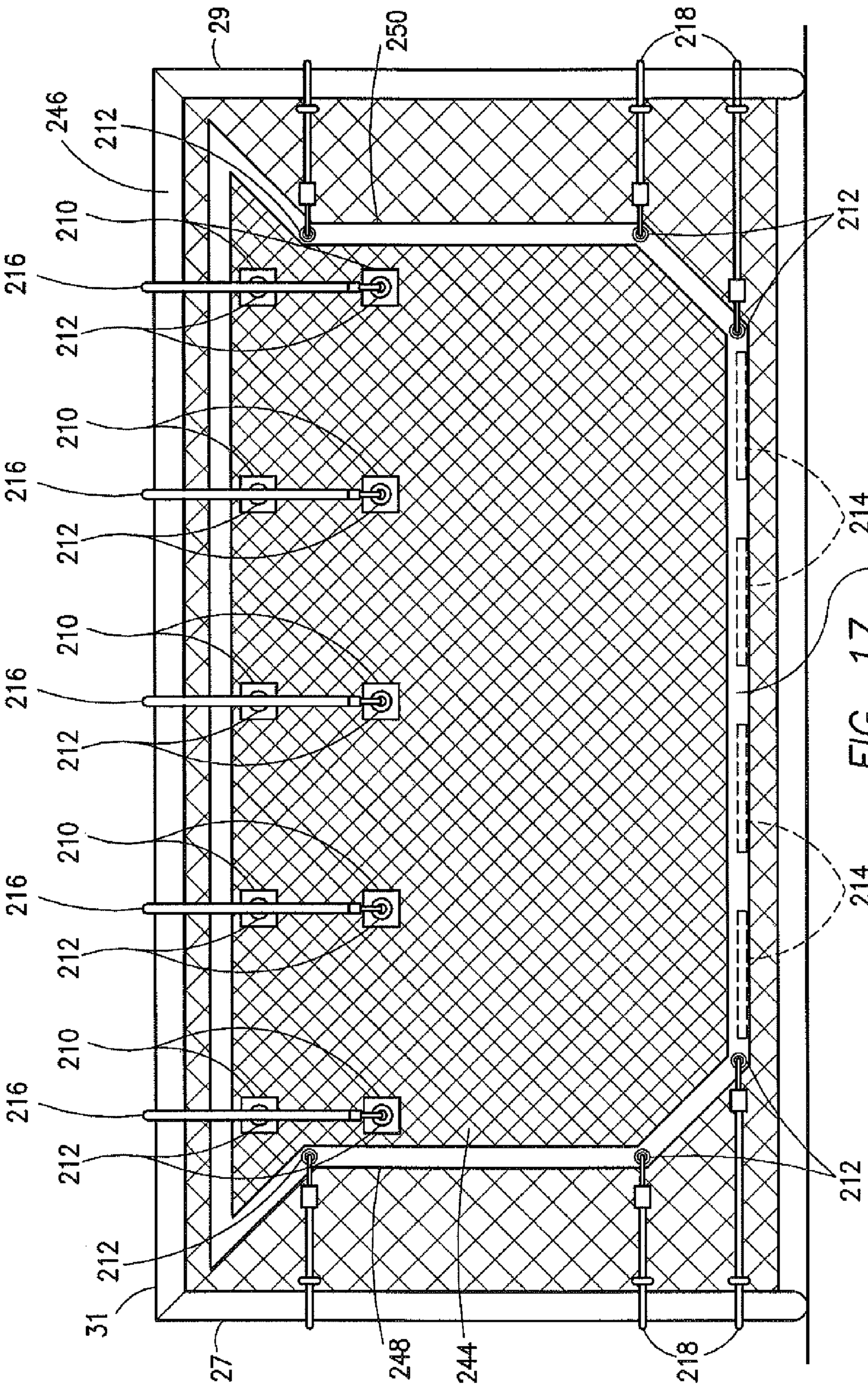
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FIG. 17

SOCCER TRAINING APPARATUS AND METHOD

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part application of U.S. patent application Ser. No. 12/015,383 filed Jan. 16, 2008 and entitled "Soccer Training Apparatus and Method" and is expressly incorporated herein by reference in its entirety to form part of the present disclosure.

FIELD OF THE INVENTION

This invention relates generally to sports training equipment and, more particularly, to an apparatus and method for a training soccer players to kick a ball past a goalkeeper.

DESCRIPTION OF THE STATE OF THE ART

In soccer, also referred to in many countries as football, a free kick at the goal is given to a team when a player on the opposite team commits certain types of fouls. A place kick is a type of free kick given at the location of the foul. During a place kick, a lined-up barrier of three to seven defenders can be positioned near the goal to help the goalkeeper in his defense and to block as much of the kicker's view of the goal opening as possible. The goalkeeper need not remain on the goal line before the ball is kicked. A penalty kick or "PK" is another type of free kick. A penalty kick is given to a team when the player of the opposite team commits the foul within the player's penalty area. The free kick at the goal is given from a penalty mark located 12 yards out (or less for youth players under certain ages) with only the goalkeeper to stop the shot. During a penalty kick, the goalkeeper must stay on the goal line until the ball is kicked, but he or she can move laterally along the goal line.

Devices have been developed to train soccer players to direct shots into selected target areas within the goal opening. During a place kick, the kicker should take into account the distance, if any, a goalkeeper is positioned in front of the goal line. A deficiency of many conventional training devices is that they cannot be positioned to simulate a goalkeeper standing in front of the goal line. Another problem is that many convention training devices do not simulate many limitations of a goalkeeper's reach, that the goalkeeper will sometimes fail to stop a shot within reach, and that the goalkeeper will sometimes stop a shot that is typically out of reach. For example, many conventional devices do not allow for the possibility of a shot just below the entire length of the horizontal crossbar of the goal, just inside the entire length of the vertical side posts, and at the corners of the goal. A goalkeeper is less likely to stop a shot in these areas compared to the center of the goal.

Accordingly, there is a need for a soccer training apparatus and method that trains players to score a shot by simulating the reach of a goalkeeper standing on the goal line and/or a goalkeeper standing at a distance in front of the goal line. There is also a need for a soccer training apparatus and method that simulates the limitations of a goalkeeper's reach relative to the horizontal crossbar of the goal and/or along the vertical side posts. There is a further need for a soccer training apparatus and method that simulates real-world situations in which shots that are typically out of a goalkeeper's reach will sometimes fail to score and shots that are typically within the goalkeeper's reach will sometimes score. The present invention satisfies these and other needs.

SUMMARY OF THE INVENTION

Briefly and in general terms, the present invention is directed to a soccer training apparatus and method that involves simulation of a goalkeeper.

A soccer training apparatus, according to aspects of the present invention, comprises a net capable of being placed in a deployed position, connected to or located adjacent a soccer goal frame and above a soccer playing surface, so as to cover a portion of a target opening bounded by the soccer goal frame and soccer playing surface. The net includes a peripheral edge located relative to the soccer goal frame so as to form a gap which extends around the net in the deployed position. Such gap has a size sufficient to allow a soccer ball to pass through and enter the soccer goal area.

In one presently preferred embodiment, the bottom edge of the net is provided with weights to assist in holding it in place relative to the playing surface. A number of hooks may secure the net to the horizontal cross bar of the goal frame, and a number of connectors may extend between the sides edges of the net and the vertical side posts of the goad frame.

In another embodiment of this invention, the net has a height dimension equal to approximately one-half of the height of the goal opening. The net is movable between an upper position adjacent the horizontal cross bar of the goal where it is held in place by hooks and connectors leaving the bottom half of the goal opening exposed, and a lower position adjacent to the playing surface where it is held in place by connectors and the upper half of the goal opening is exposed.

BRIEF DESCRIPTION OF THE DRAWINGS

The structure, operation and advantages of the subject invention will become further apparent upon consideration of the following description, taken in conjunction with the accompanying drawings, wherein:

FIG. **1** is a front view of a soccer training apparatus according to an embodiment of the present invention, showing a net defining a blocking area having the general shape of a cross;

FIG. **2** is a front perspective view of the soccer training apparatus of FIG. **1** showing the net secured to a goal frame with cords and straps;

FIG. **3** is a front perspective view of a soccer training apparatus according to another embodiment of the present invention, showing a net attached to a goal frame with cords and straps and kept above the soccer field by a horizontal rod supported by leg members;

FIG. **4** is a front perspective view of a free-standing soccer training apparatus according to yet another embodiment of the present invention, showing a stabilizing device that includes a net frame and braces extending backwards from the net frame, the net frame encompassing a net in a first deployed position in which the net is aligned with vertical side posts;

FIG. **5** is a front perspective view of the free-standing soccer training apparatus of FIG. **4** showing the net in a second deployed position at a forward distance in front of the side posts;

FIG. **6** is a schematic, plan view of the free-standing soccer training apparatus of FIG. **4** showing the net in the second deployed position in front of the side posts and showing how a soccer ball can be kicked in one of two directions relative to a blocking plane of the apparatus;

FIG. **7** is a rear perspective view of the free-standing soccer training apparatus of FIG. **4** showing the net stabilized by braces extending rearward from the blocking plane and supported by a bed of spikes for maintaining the net at any distance in front of a goal;

FIG. **8** is a side view of the free-standing soccer training apparatus of FIG. **4** showing the net at the second deployed position in front of the side posts;

FIG. **9** is front view of a still further embodiment of this invention employing hooks at the top edge of the net, side straps and a sleeve along the net bottom within which weights are mounted;

FIG. **10** is a cross sectional view taken generally along line **10-10** of FIG. **9** showing one of the weights in the bottom sleeve of the net;

FIG. **11** is a perspective view of a connector coupled to a side post of the goal;

FIG. **12** is a perspective view of a hook connected to the cross bar of the goal and to the net;

FIG. **13** is a perspective view of the hook in a retracted position;

FIG. **14** is a cross sectional view of the hook in an extended position;

FIG. **15** is a front view of another embodiment of the soccer training device of this invention in a first deployed position;

FIG. **16** is a view similar to FIG. **15** except with the net in a second deployed position; and

FIG. **17** is a view of still another embodiment of the soccer training device herein.

DETAILED DESCRIPTION OF THE INVENTION

Referring now in more detail to the exemplary drawings for purposes of illustrating embodiments of the invention, wherein like reference numerals designate corresponding or like elements among the several views, there is shown in FIG. **1** a soccer training apparatus **10** that includes a net **12** having a peripheral edge **14**. Preferably, though not necessarily, the apparatus **10** is collapsible to facilitate storage when not in use. The apparatus **10** is shown in an outstretched, deployed configuration in which the peripheral edge **14** defines a generally cross-shaped blocking surface area **16**. The net **12** extends across the entire blocking surface area **16**, although the net is only partially shown for ease and clarity of illustration.

The generally cross-shaped blocking surface area **16** simulates the reach of a person acting as goalkeeper. The blocking surface area **16** has cutouts or recesses **18** at the top and bottom corners. The shape and location of the recesses **18** on the blocking surface area **16** correspond to areas where the goalkeeper is less likely to stop a soccer ball from entering a soccer goal area. In the illustrated embodiment, the recesses **18** have the shape of a quadrant of an ellipse and have curved edges so that the blocking surface area **16** is eight sided. In other embodiments, the recesses **18** can be triangular, rectangular, or have another shape so that the blocking surface area **16** has additional corners and more sides.

Referring again to FIG. **1**, the net **12** includes a first side portion **11**, a second side portion **13**, and a middle portion **15** disposed between the first and second side portions. The middle portion **15** has an overall vertical dimension **17** that is greater than average vertical dimensions **19** of the first and second side portions **11**, **13**. The middle portion **15** also has an overall horizontal dimension **21** that is greater than overall horizontal dimensions **23** of the first and second side portions. Thus, it will be appreciated that the middle portion **15** covers an area greater than the first and second side portions individually.

In the illustrated embodiment of FIG. **1**, the overall vertical and horizontal dimensions **17**, **21** of the middle portion **16** are equivalent or substantially equivalent to 1.5 meters (5 feet) and 2.7 meters (9 feet), respectively. The overall horizontal dimension **23** of the first and second side portions **11**, **13** is equivalent or substantially equivalent to 0.8 meters (2 feet, 6 inches). The vertical dimension **25** of the first and second side portions **11**, **13** varies from the outer edge to the inner edge of the side portions **11**, **13**. For the first and second side portions **11**, **13**, the vertical dimension **25***a* at the inner edge is equivalent or substantially equivalent to 1.5 meters (5 feet), and the vertical dimension **25***b* at the outer edge is equivalent or substantially equivalent to 0.4 meters (1 foot, 4 inches).

In other embodiments, the net **12** can have other dimensional sizes. For example, a soccer training apparatus designed for small children can have dimensional sizes that are less than what is specified above. As a further example, a soccer training apparatus can have dimensional sizes greater than what is specified above to simulate a goalkeeper with a greater reach.

The net **12** can be made of any number of materials, including but not limited to bungee cords, shock cords, or other elastic cords arranged in a mesh; knotted rope or cords made of synthetic or natural fibers; and combinations thereof. The net **12** can have a high visibility color, such as red, so that the blocking surface area **16** and the gap surrounding it are more easily discernable from a distance. Preferably, though not necessarily, the net **12** is elastic so that it stretches and absorbs impacts from a moving soccer ball or player. In the illustrated embodiment, the net **12** is taught and fully stretched when the apparatus is in the deployed configuration so that a soccer ball rebounds to the soccer field after hitting the net. In other embodiments, the net **12** can be loose so that the soccer ball does not rebound to the soccer field after hitting the net.

The peripheral edge **14** can also be made of any number of materials, including but not limited to bungee cords or other elastic cords, metal rods or tubing, metal cabling, rigid or semi-rigid plastic strips, rope, webbing, and combinations thereof. Preferably, though not necessarily, the material used at the peripheral edge **14** is made of a heavier gauge or thicker material or has a greater tensile strength than the material used for the net **12**. In this way, the shape of the blocking surface area **16** can be maintained by securing only a few areas of the peripheral edge **14** to a goalpost, stakes in the soccer playing surface, and/or other support structure. In other embodiments, peripheral edge **14** is just the outer boundary of the net **12** and does not include any material in addition to the net itself.

In the embodiment of FIG. **1**, the peripheral edge **14** is made of a bungee material of sufficient thickness to maintain its elasticity with prolonged use outdoors. The bungee material includes one or more elastic strands forming a core that is covered by a woven sheath usually of nylon or cotton. Use of the bungee material gives the net a compliant peripheral edge. The compliant peripheral edge **14** on the net **12** increases the probability that a moving soccer ball will continue into the goal opening **26** when the ball contacts the peripheral edge with sufficient speed. Thus, it will be appreciated that the peripheral edge **14** simulates the real-world situation where, due to the flexibility of the goalkeeper's outstretched fingers, the goalkeeper is sometimes unable to block a shot within his or her reach.

Referring next to FIG. **2**, a soccer goal frame **20** with goal netting **22** is shown on a grass field or soccer playing surface

24. The goal opening **26** is located at the front of the goal frame **20** and is defined by spaced, vertical side posts **27** and **29** connected to one another by a horizontal cross bar **31**. A generally C-shaped support **33** is connected to each side post **27**, **29** for stability, and the supports **33** are connected to one another by a second cross bar **35**. The goal netting **22** is connected to the supports **33** and second cross bar **35** along the sides and rear of the goal frame **20**. The goal opening **26** has a generally rectangular shape bounded by the soccer playing surface **24**, the vertical side posts **27**, **29** and the horizontal cross bar **31** of the goal frame **20**. For soccer games with adult players, the goal frame **20** is typically sized so that the goal opening **26** is 2.4 meters (8 feet) high by 7.3 meters (24 feet wide).

In use, the net **12** can be placed in a deployed position so as to cover a central portion of the goal opening **26**. The net **12** has a maximum or overall width **28** and a maximum or overall height **30**. The overall width **28** and height **30** of the net **12** are less than the width **32** and height **34**, respectively, of the goal frame **20** and goal opening **26**. In the illustrated embodiment, the overall width **28** and height **30** are equivalent or substantially equivalent to 4.3 meters (14 feet) and 1.8 meters (5 feet, 10 inches), respectively. Applicant has found that these overall dimensions accurately represent the reach of the typical goalkeeper. In other embodiments, the overall width **28** and height **30** can have other dimensions.

Still referring to FIG. **2**, a stabilizing device **40** is connected to the net **12**. The stabilizing device **40** is adapted to keep the net in the deployed position with respect to the goal frame **20** and playing surface **24**. In the illustrated embodiment, the net **12** is aligned with the plane defined by the vertical side posts **27**, **29** of the goal frame **20**. In this manner, the apparatus **10** simulates a goalkeeper during a penalty kick. During a penalty kick, the goalkeeper is allowed to move laterally or side to side, but must remain on his goal line, facing the kicker, between the side posts **27**, **29** until the ball has been kicked.

Instead of being used to block the goal, the apparatus **10** can also be used as a mini-goal during a short-sided game in which there are less than eleven players per team. In short-sided games, the size of the goal is typically smaller than the standard goal size of 7.3 meters (24 feet) wide by 2.4 meters (8 feet) high. Conventionally, cones or pylons are used to demarcate the reduced width of the mini-goal in short-sided games; however, cones and pylons fail to demarcate the reduced height of the mini-goal. The net of a soccer training apparatus of the present invention can be used to demarcate the reduced width and height of the mini-goal in a short-sided game. Thus, it will be appreciated that the soccer training apparatus of the present invention is useful in a variety of situations.

With continued reference to FIG. **2**, alignment of the net **12** with the vertical side posts **27**, **29** is maintained by the stabilizing device **40**, which includes a plurality of cords **42** and straps **44** adapted to be attached to the goal frame **20**. The peripheral edge **14** of the net **12** includes a plurality of corners and each one of the cords **42** is attached to a different one of the corners. In this manner, the net **12** can be placed in tension and the peripheral edge **14** maintains its shape during use. The cords **42** and straps **44** can be made of elastic materials, metal cabling, nylon or polypropylene rope or webbing, combinations thereof, and other materials. To facilitate rapid attachment to and detachment from the goal frame **20**, the straps **44** can include Velcro closures, other hook-and-loop devices, cam type or slide release buckles, double D-rings, ratchet devices, hooks, and clips.

The cords **42** can be extended across selected segments of the gap **36** to reduce the probability that a soccer ball moving toward the gap will enter the goal. In this manner, the cords **42** can be used to simulate real-world situations where the goalkeeper is sometimes able to stop a ball at distant regions of the goal opening **26** next to the side posts and crossbar.

The peripheral edge **14** is dimensioned to allow a gap **36** to extend entirely around the net **12** such that the gap **36** separates the net **12** from the side posts **27**, **29** and cross bar **31** of the goal frame **20**, and from the playing surface **24**. The gap **36** varies in size along the peripheral edge **14**, as discussed below, but in every segment of the gap **36** its size is sufficient to allow a soccer ball to pass through and enter the target area **26**. When the apparatus **10** is used with a standard soccer ball, which typically has a diameter of about 23 centimeters (9 inches) or less, the gap **36** preferably extends more than 23 centimeters (9 inches) above, below, and to both sides of the peripheral edge **14**.

In the deployed position shown in FIG. **2**, the gap **36** extends 0.6 meter (2 feet) below and 0.3 meter (1 foot) above the middle portion **15**, and at least 1.5 meters (5 feet) laterally to the side of the first and second side portions **11**, **13**. The gap **36** is larger at the recesses **18** of the blocking surface area **16**. At the bottom recesses **18***a*, **18***b*, the gap **36** extends at least 0.9 meters (3 feet) downward to the playing surface **24** and at least 2.3 meters (7 feet, 6 inches) laterally to the side posts **27**, **29**. At the top cutouts **18***c*, **18***d*, the gap extends at least 1.1 meters (3 feet, 8 inches) upward toward the horizontal cross bar **31** and at least 2.3 meters (7 feet, 6 inches) laterally to the side posts **27**, **29**. Applicant has found that a peripheral edge **14** surrounded by the above specified gap **36** is optimal for training a kicker to score during a penalty kick.

In FIG. **3**, there is shown another embodiment of a soccer training apparatus **50** having a net **52** and peripheral edge **54** similar to the embodiments of FIGS. **1** and **2**. The apparatus **50** is installed on the goal frame **20** so that the net **52** lies on the plane defined by the vertical side posts **27**, **29** of the goal frame **20**. The net **52** has a middle portion **54** disposed between two side portions **58**. A gap **59** is formed between the peripheral edge of the net **52** and the side posts **27**, **29**, the cross bar **31** and the playing surface **24**. The dimensions of gap **59** are approximately the same as those of gap **36** described above in connection with a discussion of FIG. **2**.

The apparatus **50** also includes a stabilizing device **60** that comprises a plurality of cords **62** with straps **64**. The stabilizing device **60** also includes a horizontal rod **66** and two leg members **68**. The horizontal rod **66** and leg members **68** can be made of the same or different type of structure and material. Suitable structures and materials include without limitation solid rods, hollow tubing, extrusions, metal, plastic, wood, and fiber reinforced composites.

The rod **66** is attached to the bottom edge of the middle portion **54** of the net **52**. Each of the leg members **68** has an end attached to the rod **66** and an opposite end attached to a bed of spikes **70** insertable into grass field or other type of soccer playing surface **24**. The bed of spikes **70** includes a platform that helps to keep the leg members **68** from sinking into the playing surface **24**. In this way, the dimensions of the gap **59** below and above the net **52** is maintained. Preferably, though not necessarily, the rod **66** is made of a rigid material, such as metal tubing, to better maintain the net **52** in its deployed position in relation to the goal frame **20**. To facilitate storage of the apparatus **50** after use, the rod **66** can include a centrally located joint **72** to allow the rod **66** to be folded in half.

In other embodiments, the stabilizing device **60** includes additional cords that have one end attached to the ends of the rod **66** and/or the lowest corners of the net **52**. The opposite end of the cords can be attached to the goal frame **20** or stakes

secured in the playing surface **24**. The additional cords would help keep that apparatus **50** from lifting off the playing surface **24** due to impacts from a soccer ball or due to upward tension provided by other cords **62** that hold the net **52** upright.

Referring next to FIGS. **4-8**, there is shown an embodiment of a soccer training apparatus **80** maintains its position relative to the goal frame **20** without necessarily being connected to the goal frame. The apparatus **80** has a net **82** and a stabilizing device **86**.

In FIG. **4**, the net **82** is shown in a first deployed position. The net **82** has a blocking plane **81** bounded by a peripheral edge **84** on its perimeter. The net **82** is centered between the vertical side posts **27**, **29** of the goal frame **20** and lies on the plane defined by the vertical side posts **27**, **29**. In this manner, the net **82** can be used to simulate the reach of a goalkeeper during a penalty kick.

In FIGS. **5**, **6**, and **8**, the net **82** is shown in a second deployed position. The net **82** is not necessarily centered between the vertical side posts **27**, **29** and is positioned ahead or in front of the plane defined by the side posts **27**, **29**. In the second deployed position, a forward distance **87** separates net **82** and from the side posts **27**, **29**. In this manner, the net **82** is used to simulate the reach of a goalkeeper during a free kick or place kick.

During a place kick, the goalkeeper is not required to remain on the goal line before the ball is kicked. The goalkeeper can be in front of the goal line and/or closer to one of the side posts **85**, depending on where the ball is located in preparation for the place kick. The soccer training apparatus **80** can easily be moved to any position in front of the goal frame **20** to simulate the reach of a goalkeeper during a place kick.

As shown in FIG. **6**, a ball that travels in a slanted or oblique direction **120** to the blocking plane **81** is more likely to enter the goal than a ball that travels in a direction **122** perpendicular to the blocking plane **81**. Thus, the apparatus **80** can be positioned in front of the goal frame **20** to train a kicker to direct the ball in direction that is most likely to enter the goal. During training, the forward distance **87** can be selected to create any desired separation between the net **82** and the side posts **85** and goal opening **26** it make it more or less difficult for a kicker to score. That is, the forward distance **87** can be selected so that a ball moving toward the gap will have a lesser probability of entering the goal area when moving in a direction perpendicular to a blocking plane **81** defined by a peripheral edge of the net than in an oblique direction relative to the blocking plane.

Referring again to FIG. **5**, the net **82** includes a middle portion **88** disposed between two side portions **90**. The middle portion **88** has horizontal top and bottom edges **85**, and each of the side portions **90** has arcuate top and bottom edges **87** and a vertical side edge **89**.

The stabilizing device **86** includes a net frame **92** attached to the peripheral edge **84** of the net **82**. Preferably, though not necessarily, the net frame **92** extends around the entire perimeter of the net **82**, as shown in FIGS. **4**, **5**, and **7**. The stabilizing device **86** also includes two rear braces **94** attached to the net frame **92**. The braces **94** extend in a rearward direction away from a blocking plane **81**. To facilitate storage when not in use, the braces **94** can be attached to the net frame **92** with a hinge to allow the braces to fold flat with the net frame. In other embodiments, only one or more than two braces can be employed.

As shown in FIGS. **7** and **8**, each of the rear braces **94** includes a lower rod **96** and an upper rod **98**. The lower and upper rods **96**, **98** are generally elongate in shape and can be made of the same or different type of structure and material. Suitable structures and materials include without limitation solid rods, hollow tubing, extrusions, metal, plastic, wood, and fiber reinforced composites. The lower rod **96** has a coupled end **91** connected to the net frame **92** and a free end **93** capable of engaging the soccer playing surface **24**. The free end **93** can include a bed of spikes **95** to keep the apparatus **80** from slipping backwards when the net **82** is hit from the front. The upper rod **98** has a first coupled end **97** attached to the net frame **92** and second coupled end **99** attached to the lower rod **96**.

The stabilizing device **86** also includes a horizontal rod **100** and two leg members **102**. The horizontal rod **100** forms a part of the net frame **92** and is attached to the entire bottom edge of the middle portion **88**. Each of the leg members **102** has an end attached to the rod **100** and an opposite end attached to a bed of spikes **104** insertable into grass or other type of soccer playing surface.

Referring again to FIGS. **4** and **5**, a gap **130** extends completely around the net **82** when the net is in the deployed position at the goal frame **20**. The gap separates the net frame **92** from the goal frame **20** and playing surface **24** by sufficient distances to allow a soccer ball to enter the goal from above, below, and both side of the net **82**. In the illustrated embodiment, the leg members **102** are sized such that the gap extends 0.3 meter (1 foot) below the middle portion **92**, which is smaller than the 0.6-meter gap below the middle portion of the embodiment shown in FIG. **2**. The smaller size of the bottom gap simulates the decreased likelihood that the kicker can make a shot during a place kick (FIGS. **5**, **6**, and **8**). During a place kick, the kicker is typically further away from the goal than during a penalty kick, so the goalkeeper has more time block a shot.

Referring once again to FIG. **4**, the net frame **92** has an overall horizontal dimension **106** and an overall vertical dimension **108** that are equivalent or substantially equivalent to 4.3 meters (14 feet) and 1.8 meters (5 feet, 10 inches) respectively. In this manner, with a standard goal frame having an inside dimension of 7.3 meters (24 feet) wide by 2.4 meters (8 feet) high, the apparatus **50** can be centered such that the outer-most side edges **110** of the net frame **92** are 1.5 meters (5 feet) from the vertical side posts of the goal frame **20**. Also, the 1.8-meter overall vertical dimension of the net is greater than the 1.5-meter overall vertical dimension of the embodiment shown in FIG. **2**. The greater overall size of the net simulates the increased reach of the goalkeeper during a place kick (FIGS. **5**, **6**, and **8**). As previously mentioned, the goalkeeper typically has more time to react during a place kick as compared to a penalty kick.

In other embodiments, the overall vertical dimension of the net can be greater than 1.8 meters so that the top edge of the net is taller and closer to the horizontal crossbar of the goal as compared to the top edge of the embodiment shown in FIG. **2**. In FIG. **2** the top edge of the net is at 2.1 meters (7 feet) above the ground and 0.3 meters (1 foot) below the goal crossbar. During training, a taller top edge enables a kicker to visualize a narrow zone into which he or she should kick the ball during a place kick. During a place kick (FIGS. **5**, **6**, and **8**), the goalkeeper can be six yards in front of the goal line, which provides an opportunity to score a shot even though the goalkeeper typically has more time to react as compared to a penalty kick. By aiming at the narrow zone located slightly below the goal cross bar **31**, a kicker can learn to kick the ball along a trajectory that breaks or curves upward out of the goalkeeper's reach then downward into the goal. Applicant has found that aiming at the narrow zone provided by the top edge of the net is a better alternative to using only the goal

cross bar **31** as a visual aid because aiming at the cross bar **31** often causes kicker to shoot the ball too high.

Referring now to FIG. **9**, a still further embodiment of the soccer training device of this invention is depicted. The training device includes a net **200** having a periphery forming top, bottom and side edges. The top edge is connected to a top strap **202**, the side edges mount opposed side straps **204**, **206** and the bottom edge is connected to a bottom strap **208**. Each of the straps **202-208** may be formed of fabric, nylon or other suitable material which is folded in half and sewn, glued or otherwise connected to the net **200**. A series of spaced patches **210**, each formed of a fabric or plastic material, are connected to the top strap **202** and mount an eyelet **212**. The side straps **206** and **208** also mount eyelets **212** in the position depicted in FIG. **9**. In the presently preferred embodiment, a number of weights **214** are located at spaced intervals within the bottom strap **208**. See FIG. **10**. The weights **214** may take the form of bars, plates or the like and function to enhance the rebounding of a ball when it contacts the net **200**. In order to limit sagging of the net **200**, the weights **214** may be progressively lighter from the sides of the net **200** toward its center.

The net **200** is held in place relative to the goal opening **26** by a number of hooks **216** and connectors **218**. As best seen in FIG. **11**, each connector **218** comprises a length of cord **220**, which may be made of the same material as cord **42** described above, having a loop **222** at one end and a fastener **223** at the opposite end. Each connector **218** is affixed to a side post **27**, **29** of the goal as shown in FIG. **11** and its fastener **224** is extended into engagement with one of the eyelets **212** in the side straps **204** or **206** of net **200**. Preferably, the net **200** has a width dimension such that the connectors **218** are taught when connected to the net **200** leaving a space between the side straps **204**, **206** and side posts **27**, **29** which is large enough to allow a soccer ball to pass through. Further, the height dimension of the net **200** relative to the goal opening **26** defines a space between the cross bar **31** and top strap **202**, and a space between the playing surface **24** and bottom strap **208**, to allow for the passage of a soccer ball into the goal opening **26**. For purposes of the present discussion, the term "width" refers to a direction between the side posts **27**, **29** and the term "height" refers to a direction between the cross bar **31** and playing surface **24**.

Referring now to FIGS. **13** and **14**, the hooks **216** employed with the soccer training device are shown in more detail. Each of the hooks **216** comprises a length of plastic or similar material having a curved end **224**, a substantially straight leg section **226** and a hollow interior **228**. A finger **230** extends outwardly from the leg section **226** as shown. In the presently preferred embodiment, a cord **232** formed of an elastic material, such as a bungee cord, is positioned within the hollow interior **228** with one end affixed to the curved end **224** and the opposite end connected to a fastener **223**. The cord **232** is movable between a retracted position shown in FIG. **13** and an extended position depicted in FIG. **14**.

The purpose of the cord **232** in the hooks **216** is to facilitate mounting of the net **200** to the goal. Initially, the curved end **224** of each hook **216** may be placed over the cross bar **31**. The cord **232** is then extended by grasping the fastener **223** and pulling downwardly so that the fastener **223** may be placed into an eyelet **212** on the top strap **202** of the net **200**. After the fastener **223** is in place, the cord **232** may be released allowing it to move from the extended position shown in FIG. **14** toward the retracted position of FIG. **13** thus exerting tension on the net **200** to hold it taught. This feature of the present invention is especially helpful for those of smaller stature to help them more easily mount the net **200** to the goal.

Referring now to FIGS. **12**, **15** and **16**, a still further embodiment of the soccer training device of this invention is shown. Soccer coaches have different training methods and ideas of how best to execute a penalty kick or other free kick. Some coaches teach players to aim only toward the bottom portion of the goal opening **26** in order to avoid kicking the ball over the cross bar **31**. Others train players to aim at points both higher and lower relative to the goal opening **26**. The device depicted in FIGS. **12**, **15** and **16** comprises a net **234** which has approximately one-half of the height dimension of the goal opening **26**. The net **234** includes a top strap **236**, opposed side straps **238**, **240** and a bottom strap **242**. The straps **236-242** may be the same as described in connection with a discussion of FIG. **9**, and weights **214** as noted above may be positioned within the bottom strap **242**.

In this embodiment of the invention, the net **234** is movable between a raised position shown in FIG. **15** and a lowered position illustrated in FIG. **16**. With the net **234** in the raised position, the top strap **236** is located immediately adjacent to the cross bar **31** and the bottom strap **242** is positioned approximately in the center of the side posts **27**, **29**. In the lowered position, the bottom strap **242** is near or touches the playing surface **24** and the top strap **236** is located at about the center of the side posts **27**, **29**. As is apparent, different target areas are provided depending on whether the net **234** is in the raised or lowered position. The soccer ball is not permitted to pass into the goal opening **26** between the top strap **236** of the net **234** and the cross bar **31** when in the raised position, or between the bottom strap **242** of the net **234** and the playing surface **24** when in the lowered position.

The net **234** is held in the raised position by hooks **216** and connectors **218**, and in the lowered position by connectors **218** alone. Preferably, a number of patches **210** each having a coupler in the form of an eyelet **212** are affixed to the net **234** in spaced pairs. An upper patch **210** and eyelet **212** of each pair is positioned near the top strap **236**, and a lower patch **210** and eyelet **212** of such pair is located vertically below the upper one. A number of eyelets **212** are also mounted to each of the side straps **238** and **240** of the net **234**. As best seen in FIG. **12**, the upper eyelet **212** of each pair receives the finger **230** of a hook **216** and the lower eyelet **212** of each pair receives the fastener **223** at the bottom of the cord **232**. It is contemplated that to affix the net **234** to the goal, the finger **230** of each hook **216** is first inserted into an upper eyelet **212** and then the curved end **224** of the hook **216** is extended over the cross bar **31**. The fastener **223** connected to the cord **232** of the hook **216** may then be inserted into the lower eyelet **212** of each pair. The connectors **218** are attached to the eyelets **212** on the side straps **238**, **240** of net **234** in the same manner described above in connection with a discussion of FIG. **9**.

As seen in FIG. **16**, in order to move the net **234** from its raised position to the lowered position the hooks **216** are removed. The net **234** may be moved relative to the side posts **27**, **29** with the connectors **218** attached, or the connectors **218** may be removed and reattached when in the lowered position. The sole means of attachment of the net **234** to the goal in the lowered position is provided by the connectors **218**.

Referring now to FIG. **17**, a still further embodiment of the soccer training device of this invention is illustrated. In this device, a net **244** is provided having a height dimension which, when assembled on the goal, does not permit a soccer ball to pass into the goal opening **26** either at the top or the bottom. The net **244** includes a top strap **246**, opposed side straps **248**, **250** and a bottom strap **252** which may mount weights **214** as discussed above in connection with FIG. **9**. Each side strap **248**, **250** has spaced eyelets **212** which receive

the fastener **223** of a connector **218** secured to a side post **27** or **29**. Hooks **216** are mounted to pairs of upper and lower eyelets **212** in the same manner described in connection with a discussion of FIGS. **12**, **15** and **16**.

While several particular forms of the invention have been illustrated and described, it will also be apparent that various modifications can be made without departing from the scope of the invention. For example, a flat board, a continuous sheet material, or fabric can be used cover strategic portions of the goal instead of or in addition to a net. As a further example, the goal blocking surface area can be scaled down to a smaller size for youth soccer play. In yet a further example, the leg members can be adjustable in length to allow the vertical gap between the net and the soccer field to be altered as desired. It is also contemplated that various combinations or sub combinations of the specific features and aspects of the disclosed embodiments can be combined with or substituted for one another in order to form varying modes of the invention. Accordingly, it is not intended that the invention be limited, except as by the appended claims.

The invention claimed is:

1. A soccer training apparatus for use with a soccer goal having spaced first and second side posts connected by a cross bar which, together with a playing surface, collectively define a goal opening, said apparatus comprising:

a net having a periphery forming a top edge, a bottom edge, a first side edge and a second side edge;

at least one weight coupled to said bottom edge of said net;

at least one fastening device having an end section and a leg section collectively defining a hollow interior, said end section being positionable over the cross bar of the soccer goal so that said leg section extends in a direction toward the playing surface, an elastic member at least partially disposed within said hollow interior, said elastic member having an inner end connected to said at least one fastening device and an outer end protruding from said leg section, said elastic member being moveable to an extended position relative to said leg section of said at least one fastening device with said end section positioned over the cross bar to permit attachment of said outer end of said elastic member to said net;

at least one first connector extending between said first side edge of said net and the first post of the soccer goal and at least one second connector extending between said second side edge of said net and the second post of the soccer goal, said at least one first and second connectors and said at least one fastening device positioning said net relative to the goal opening of the soccer goal such that at least one space is formed between said periphery of said net and the goal opening to permit a soccer ball to pass through and into the soccer goal.

2. The apparatus of claim **1** in which said leg section of said at least one fasting device is formed with a projection, and said outer end of said elastic member includes a fastener element.

3. The apparatus of claim **2** further including a number of first couplers and second couplers connected to said net in pairs wherein one first coupler aligns with one second coupler in each pair, said projection of said leg section of said at least one fastening device connecting to said first coupler of one pair and said fastener element of said outer end of said elastic member connecting to said second coupler of said one pair.

4. The apparatus of claim **2** in which a number of couplers are mounted to said top edge of said net, said fastener element of said outer end of said elastic member being connected to one of said couplers.

5. The apparatus of claim **1** in which said at least one weight is a number of weights which are spaced from one another between said first and second side edges of said net.

6. The apparatus of claim **5** in which said weights are progressively lighter from said side edges of said net toward the middle of said net.

7. The apparatus of claim **5** in which said bottom edge of said net is formed with a strap having an interior within which said number of weights are located.

8. A soccer training apparatus for use with a soccer goal having spaced first and second side posts connected by a cross bar which, together with a playing surface, collectively define a goal opening, said apparatus comprising:

a net having a periphery forming a top edge, a bottom edge, a first side edge and a second side edge;

at least one fastening device having an end section and a leg section collectively defining a hollow interior, said end section being positionable over the cross bar of the soccer goal so that said leg section extends in a direction toward the playing surface, an elastic member at least partially disposed within said hollow interior, said elastic member having an inner end connected to said at least one fastening device and an outer end protruding from said leg section thereof, said elastic member being moveable to an extended position relative to said leg section of said at least one fastening device with said end section positioned over the cross bar to permit attachment of said outer end of said elastic member to said net;

at least one first connector extending between said first side edge of said net and the first post of the soccer goal and at least one second connector extending between said second side edge of said net and the second post of the soccer goal;

said at least one fastening device and said at least one first and second connectors collectively positioning said net relative to the goal opening of the soccer goal such that at least one space is formed between said periphery of said net and the goal opening to permit a soccer ball to pass through and into the soccer goal.

9. The apparatus of claim **8** further including at least, one weight coupled to said bottom edge of said net.

10. The apparatus of claim **9** in which said at least one weight is a number of weights which are spaced from one another between said first and second side edges of said net.

11. The apparatus of claim **10** in which said weights are progressively lighter from said side edges of said net toward the middle of said net.

12. The apparatus of claim **8** in which said leg section of said at least one fastening device is formed with a projection, and said outer end of said elastic member includes a fastener element.

13. The apparatus of claim **12** further including a number of first couplers and second couplers connected to said net in pairs wherein one first coupler aligns with one second coupler in each pair, said projection of said leg section of said at least one fastening device connecting to said first coupler of one pair and said fastener element of said outer end of said elastic member connecting to said second coupler of said one pair.

14. The apparatus of claim **12** in which a number of couplers are mounted to said top edge of said net, said fastener element of said outer end of said elastic member being connected to one of said couplers.

15. A soccer training apparatus for use with a soccer goal having spaced first and second side posts connected by a cross bar which, together with a playing surface, collectively define a goal opening having a side-to-side dimension and a top-to-bottom dimension, said apparatus comprising:

a net having a periphery forming a top edge, a bottom edge, a first side edge and a second side edge, said first and second side edges being spaced from each other a distance which is approximately equal to the side-to-side dimension of the goal opening, said top and bottom edges being spaced from one another a distance which is less than the top-to-bottom dimension of the goal opening;

a number of connectors, at least one first connector extending between said first side edge of said net and the first post of the soccer goal and at least one second connector extending between said second side edge of said net and the second post of the soccer goal;

said at least one first and second connectors being effective to locate said net in a first position relative to the goal opening such that a soccer ball cannot pass between said first side edge and the first post or between said second side edge and the second post or between said top edge and the cross bar, an enlarged first space being formed between said bottom edge of said net and the playing surface;

said at least one first and second connectors being effective to locate said net in a second position relative to said goal opening, an enlarged second space being formed between said top edge of said net and the cross bar with said net in said second position, said net being located relative to said first and second posts and the playing surface when in said second position such that a soccer ball cannot pass between said first side edge and the first post or between said second side edge and the second post or between said bottom edge and the playing surface and having at least one fastening device having an end section and a leg section collectively defining a hollow interior, said end section being positionable over the cross bar of the soccer goal so that said leg section extends in a direction toward the playing surface, an elastic member at least partially disposed within said hollow interior, said elastic member having an inner end connected to said at least one first fastening device and an outer end protruding from said leg section, said elastic member being moveable to an extended position relative to said leg section of said at least one fastening device with said end section positioned over the cross bar to permit attachment of said outer end of said elastic member to said net.

16. The apparatus of claim **15** further including at least one weight coupled to said bottom edge of said net.

17. The apparatus of claim **16** in which said at least one weight is a number of weights which are spaced from one another between said first and second side edges of said net.

18. The apparatus of claim **16** in which said bottom edge of said net is formed with a strap having an interior within which said number of weights are located.

19. The apparatus of claim **15** in which said leg section of said at least one fastening device is formed with a projection, and said outer end of said elastic member includes a fastener element.

20. The apparatus of claim **19** further including a number of first couplers and second couplers connected to said net in pairs wherein one first coupler aligns with one second coupler in each pair, said projection of said leg section of said at least one fastening device connecting to said first coupler of one pair and said fastener element of said outer end of said elastic member connecting to said second coupler of said one pair.

21. The apparatus of claim **19** in which a number of couplers are mounted to said top edge of said net, said fastener element of said outer end of said elastic member being connected to one of said couplers.

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